Table H-1. Commercial Nurseries

	BMP LEVEL OF EFFORT		Nutrient Management Effectiveness (percent)	Water Management Effectiveness (percent)	Components				Capital Costs		Annual Operation and	1 Maintenance
COMMERCIAL NURSERIES					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
339 Acres	LOW	Nutrient Management										
		Facility nutrient reduction management plan			each	1	\$ -			,		
		Soil nutrient analysis 1			each	3	\$ 7	\$ 25	\$ 21	\$ 75		
		Irrigation water analysis2			each	1	\$ 5	\$ 30	\$ 5	\$ 30		
		Subtotal							\$ 26	\$ 10,105		
		Irrigation Management None										
		Runoff/Erosion Management										
		None										
								TOTAL	\$ 26	\$ 10,105	\$ 3	\$ 1,011

	BMP LEVEL OF EFFORT								Capital Costs		Annual Operation and	d Maintenance
COMMERCIAL NURSERIES					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
339 Acres	MEDIUM	Nutrient Management										
		Facility nutrient reduction management plan			each	1	\$ -	\$ 10,000	\$ -	\$ 10,000		
		Soil nutrient analysis ¹			each	3	\$ 7	\$ 25	\$ 21	\$ 75		
		Irrigation water analysis ²			each	1	\$ 5	\$ 30	\$ 5	\$ 30		
		Subtotal							\$ 26	\$ 10,105		
		Irrigation Management										
		Irrigation system upgrades (441, 442) ^{3 4 5}	5-35	40-85	each	1	\$ 350	\$ 3,600	\$ 350	\$ 3,600		
		Irrigation system - tailwater recovery (447) ^{3 5}	5-15	40-45	each	1	\$ 4,500	\$ 25,000	\$ 4,500	\$ 25,000		
		Irrigation water management (449) ^{3 5}	20-35	45-60	each	1	\$ 50	\$ 750	\$ 50	\$ 750		
		Subtotal							\$ 4,900	\$ 29,350		
		Runoff/Erosion Management		·								
		None										
								TOTAL	\$ 4,926	\$ 39,455	\$ 493	\$ 3,946

	BMP LEVEL OF EFFORT									Capital Costs		Annual Operation an	d Maintenance
COMMERCIAL NURSERIES					Unit	Number of Units	Cost per u (low)	nit (Cost per unit (high)	Low	High	Low	High
339 Acres	HIGH	Nutrient Management											
		Facility nutrient reduction management plan			each	1	\$	- \$	10,000	\$ -	\$ 10,000		
		Soil nutrient analysis 1			each	3	\$	7 \$	25	\$ 21	\$ 75		
		Irrigation water analysis ²			each	1	\$	5 \$	30	\$ 5	\$ 30		
		Subtotal								\$ 26	\$ 10,105		
		Irrigation Management											
		Irrigation system upgrades (441, 442) ^{3 4 5}	5-35	40-85	each	1	\$ 3.	50 \$	3,600	\$ 350	\$ 3,600		
		Irrigation system - tailwater recovery (447) ^{3 5}	5-15	40-45	each	1	\$ 4,5	00 \$	25,000	\$ 4,500	\$ 25,000		
		Irrigation water management (449) ^{3 5}	20-35	45-60	each	1	\$	50 \$	750	\$ 50	\$ 750		
		Subtotal								\$ 4,550	\$ 25,750		
		Runoff/Erosion Management											
		Access road management (560) ^{3 5}											
		Paved Drives		55-60	square yard	480	\$	2 \$	4	\$ 816	\$ 1,920		
		Runoff management system (570) ^{3 5}								\$ -	\$ -		
		Filter Trap	10-25		acre	0.25	\$ 3	75 \$	12,500	\$ 94	\$ 3,125		
		Filter Strips (393) ^{3 5}								\$ -	\$ -		
		Landscaping		5-15	acre	0.05	\$ 4.	50 \$	3,500	\$ 23	\$ 175		
		Subtotal						- 1	-,	\$ 932		1	
						L		1	OTAL	\$ 5,508			\$ 4,108

Runoff/Erosion Management

LAND USE CATEGORY	BMP LEVEL	POTENTIAL MPs / BMPs	Nutrient Management Effectiveness (percent)	Water Management Effectiveness (percent)	Components				Capital Costs		Annual Operation an	d Maintenance
AGRICULTURE					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
436 Acres	LOW	Nutrient Management				Units	(IOW)	(mgn)				
		Facility nutrient reduction management plan			each	1	s -	\$ 10,000	s -	\$ 10,000	1	
		Soil nutrient analysis 1			each	3	\$ 7	\$ 25	\$ 21	\$ 75	1	
		Irrigation water analysis2			each	1	\$ 5	\$ 30	\$ 5	\$ 30	1	
			Subtotal						\$ 26	\$ 10,105		
		Irrigation Management									1	
		None										
		Runoff/Erosion Management									1	
		None					J	TOTAL	\$ 26	A 10.105		
								IOIAL	\$ 20	\$ 10,105	\$ 3	\$ 1
LAND USE CATEGORY	BMP LEVEL OF EFFORT	POTENTIAL MPs / BMPs							Capital Costs		Annual Operation an	d Maintenance
GRICULTURE					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
436 Acres	MEDIUM	Nutrient Management				Cinco	(1011)	(ingii)				Ì
		Facility nutrient reduction management plan			each	1	\$ -	\$ 10,000	\$ -	\$ 10,000	1	
		Soil nutrient analysis 1			each	3	\$ 7	\$ 25	\$ 21	\$ 75	1	
		Irrigation water analysis ²			each	1	\$ 5	\$ 30	s 5	\$ 30	1	
			Subtotal						\$ 26	\$ 10,105		
		Irrigation Management										
		Irrigation system upgrades (441, 442) ^{3 4 5}	5-35	40-85	each	1 1	\$ 350	\$ 3,600	\$ 350	\$ 3,600	1	
		irrigation system upgrades (441, 442)	3-33	40-03								
						1	-		-			
		Irrigation system - tailwater recovery (447) ^{3 5} Irrigation water management (449) ^{3 5}	5-15 20-35	40-45 45-60	each each	1	\$ 4,500 \$ 50		\$ 4,500 \$ 50	\$ 25,000 \$ 750		

									TOTAL	\$ 4,926	\$ 39,455	\$ 493	\$ 3,946
LAND USE CATEGORY	BMP LEVEL OF EFFORT									Capital Costs		Annual Operation and	1 Maintenance
AGRICULTURE					Unit	Number of Units	Cost p		Cost per unit (high)	Low	High	Low	High
436 Acres	HIGH	Nutrient Management											
		Facility nutrient reduction management plan			each	1	\$	-	\$ 10,000	\$ -	\$ 10,000		
		Soil nutrient analysis 1			each	3	\$	7	\$ 25	\$ 21	\$ 75		
		Irrigation water analysis ²			each	1	\$	5	\$ 30	\$ 5	\$ 30		
		Subtotal								\$ 26	\$ 10,105		
		Irrigation Management											
		Irrigation system upgrades (441, 442) ^{3 4 5}	5-35	40-85	each	1	\$	350	\$ 3,600	\$ 350	\$ 3,600		
		Irrigation system - tailwater recovery (447) ^{3 5}	5-15	40-45	each	1	\$	4,500	\$ 25,000	\$ 4,500	\$ 25,000		
		Irrigation water management (449) ^{3 5}	20-35	45-60	each	1	\$	50	\$ 750	\$ 50	\$ 750		
		Subtotal								\$ 4,900	\$ 29,350		
		Runoff/Erosion Management											
		Access road management (560) ^{3 5}											
		Pave Roads		85-90	square yard	1000	\$	2		\$ 2,150			
		Pave Drives		55-60	square yard	1000	\$	2	\$ 4	\$ 1,700	\$ 4,000		
		Runoff management system (570) ^{3 5}											
		Filter Trap	10-25		acre	0.2	\$	375	\$ 12,500	\$ 75	\$ 2,500		
		Filter Strips (393) ⁵											
		Filter strip (10-20 ft wide)	2-10		acre	0.5	\$	375			\$ 6,250		
		Buffer strip (20-30 ft wide)	10-20		acre	0.5	\$	-	\$ 1,700		\$ 850		
		Landscaping	5-15		acre	0.1	\$	450	\$ 3,500				
		Subtotal				l			TOTAL	\$ 4,370 \$ 9,296			\$ 5,771
	1	I							TOTAL	\$ 9,290	φ 5/,/US	ş 930	ə 5,//1

Table H-3. Orchards

	BMP LEVEL OF EFFORT		Nutrient Management Effectiveness (percent)	Water Management Effectiveness (percent)					Capital Costs		Annual Operation and	d Maintenance
ORCHARDS					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
781 Acres	LOW	Nutrient Management										
		Facility nutrient reduction management plan			each	1	\$ -	\$ 10,000	\$ -	\$ 10,000		
		Soil nutrient analysis 1			each	3	\$ 7	\$ 25	\$ 21	\$ 75		
		Irrigation water analysis2			each	1	\$ 5	\$ 30	\$ 5	\$ 30		
		Subtotal							\$ 26	\$ 10,105		
		Irrigation Management										
		None										
		Runoff/Erosion Management										
		None										
								TOTAL	\$ 26	\$ 10,105	\$ 3	\$ 1,0

	BMP LEVEL OF EFFORT								Capital Costs		Annual Operation and	d Maintenance
ORCHARDS					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
781 Acres	MEDIUM	Nutrient Management										
		Facility nutrient reduction management plan			each	1	\$ -	\$ 10,000	\$ -	\$ 10,000		
		Soil nutrient analysis 1			each	3	\$ 7	\$ 25	\$ 21	\$ 75		
		Irrigation water analysis ²			each	1	\$ 5	\$ 30	\$ 5	\$ 30		
		Subtotal							\$ 26	\$ 10,105		
		Irrigation Management										
		Irrigation system upgrades (441, 442) ^{3 4 5}	5-35	40-85	each	1	\$ 350	\$ 3,600	\$ 350	\$ 3,600		
		Irrigation system - tailwater recovery (447) ^{3 5}	5-15	40-45	each	1	\$ 4,500	\$ 25,000	\$ 4,500	\$ 25,000		
		Irrigation water management (449) ^{3 5}	20-35	45-60	each	1	\$ 50	\$ 750	\$ 50	\$ 750		
		Subtotal							\$ 4,900	\$ 29,350		
		Runoff/Erosion Management										
		None										
			•					TOTAL	\$ 4,926	\$ 39,455	\$ 493	\$ 3,946

	BMP LEVEL OF EFFORT									Capital Costs		Annual Operation an	d Maintenance
ORCHARDS					Unit	Number of Units	Cost per (low)	unit	Cost per unit (high)	Low	High	Low	High
781 Acres	HIGH	Nutrient Management											
		Facility nutrient reduction management plan			each	1	\$	-	\$ 10,000	\$ -	\$ 10,000		
		Soil nutrient analysis 1			each	3	\$	7	\$ 25	\$ 21	\$ 75		
		Irrigation water analysis ²			each	1	\$	5	\$ 30	\$ 5	\$ 30		
		Subtotal								\$ 26	\$ 10,105		
		Irrigation Management											
		Irrigation system upgrades (441, 442) ^{3 45}	5-35	40-85	each	1	\$	50	\$ 3,600	\$ 350	\$ 3,600		
		Irrigation system - tailwater recovery (447) ^{3 5}	5-15	40-45	each	1	\$ 4,	00	\$ 25,000	\$ 4,500	\$ 25,000		
		Irrigation water management (449) ^{3 5}	20-35	45-60	each	1	\$	50	\$ 750	\$ 50	\$ 750		
		Subtotal								\$ 4,900	\$ 29,350		
		Runoff/Erosion Management											
		Access road management (560) ^{3 5}									\$ -		
		Pave roads		85-90	square yard	1000	\$	2		\$ 2,150			
		Pave drives		55-60	square yard	1000	\$	2	\$ 4	\$ 1,700	\$ 4,000		
		Runoff management system (570) ^{3 5}									\$ -		
		Filter trap	10-25		acre	0.2	\$	75	\$ 12,500	\$ 75	\$ 2,500		
		Filter Strips (393) ⁵								\$ -	\$ -		
		Filter strip (10-20 ft wide)	2-10		acre	0.5		75					
		Buffer strip (20-30 ft wide)	10-20		acre	0.5		25	\$ 1,700				
		Landscaping	5-15		acre	0.1	\$ 4	50	\$ 3,500				
		Subtotal				Į			mom i r	\$ 4,370			A 5.551
									TOTAL	\$ 9,296	\$ 57,705	\$ 930	\$ 5,771

Runoff/Erosion Management None

Table H-4. Pa	rks											
LAND USE CATEGORY	BMP LEVEI		Nutrient Management Effectiveness (percent)	Water Management Effectiveness (percent)	Components				Capital Costs		Annual Operation an	d Maintenance
PARKS			(per com)	(Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
5 Acres	LOW	Nutrient Management Facility nutrient reduction management plan			each	0	\$ -	\$ -	s -	\$ -		
		Subtotal							\$ -	\$ -	\$ -	\$
		Irrigation Management None										
		Runoff/Erosion Management None										
								TOTAL	\$ -	\$ -	\$ -	\$
LAND USE CATEGORY	BMP LEVEI OF EFFORT								Capital Costs		Annual Operation an	d Maintenance
PARKS					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
5 Acres	MEDIUM	Nutrient Management Facility nutrient reduction management plan			each	0	s -	s -	s -	s -		
		Subtotal			cacii	0	Ψ -	Ψ -	\$ -	\$ -		
		Irrigation Management										
		Irrigation water management (449) ⁵	20-35	45-60	each	1	\$ 50	\$ 750	\$ 50	\$ 750		
		6.14.4										

LAND USE CATEGORY	BMP LEVEL OF EFFORT								Capital Costs		Annual Operation and	1 Maintenance
PARKS					Unit	Number of Units	Cost per un (low)	t Cost per unit (high)	Low	High	Low	High
5 Acres	HIGH	Nutrient Management										
		Facility nutrient reduction management plan			each	0	\$	- \$ -	\$ -	\$ -		ı
		Subtotal							\$ -	\$ -		
		Irrigation Management							\$ -	\$ -		i
		Irrigation water management (449) ⁵	20-35	45-60	each	1	\$ 50	\$ 750	\$ 50	\$ 750		1
		Subtotal							\$ 50	\$ 750		
		Runoff/Erosion Management							\$ -	\$ -		
		Runoff management system (570) ^{3 5}							\$ -	\$ -		i
		Parking lot water retention		5-10	each	1	\$ 150	\$ 1,500	\$ 150	\$ 1,500		1
		Filter strips	5-15		acre	1	\$ 375	\$ 12,500	\$ 375	\$ 12,500		i
		Filter trap	10-25		acre	1	\$ 375	\$ 12,500	\$ 375	\$ 12,500		I)
		Subtotal							\$ 900	\$ 26,500		
								TOTAL	\$ 950	\$ 27,250	\$ 95	\$ 2,725

TOTAL

50 \$

750 \$

5 \$

Table H-5. Res	sidential											
LAND USE CATEGORY	BMP LEVEL OF EFFORT		Nutrient Management Effectiveness (percent)	Water Management Effectiveness (percent)	Components				Capital Costs		Annual Operation an	1 Maintenance
RESIDENTIAL					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
618 Acres	LOW	Nutrient Management Facility nutrient reduction management plan			each	1	\$ -	\$ -	s -	\$ -		
		Subtotal Irrigation Management None							\$ -	\$ -		
		Runoff/Erosion Management None										
								TOTAL	\$ -	\$ -	\$ -	\$
LAND USE CATEGORY	BMP LEVEL OF EFFORT								Capital Costs		Annual Operation an	l Maintenance
RESIDENTIAL					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
618 Acres	MEDIUM	Nutrient Management Facility nutrient reduction management plan			each	1	\$ -	\$ -	s -	\$ -		
		Subtotal							\$ -	\$ -		

618 Acres	MEDIUM	Nutrient Management										
		Facility nutrient reduction management plan			each	1	\$ -	\$ -	\$ -	\$ -		
		Subtotal							\$ -	\$ -		
		Irrigation Management										
		Irrigation water management (449) ⁵	20-35	45-60	each	1	\$ 50	\$ 750	\$ 50	\$ 750		
		Subtotal							\$ 50	\$ 750		
		Runoff/Erosion Management										
		None										
								TOTAL	\$ 50	\$ 750	\$ 5	\$ 75
LAND USE CATEGORY	OF EFFORT								Capital Costs		Annual Operation an	d Maintenance
RESIDENTIAL					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High

CATEGORY	OF EFFORT								Capital Costs		Annual Operation and	d Maintenance
RESIDENTIAL					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
618 Acres	HIGH	Nutrient Management										
		Facility nutrient reduction management plan			each	1	\$ -	\$ -	\$ -	\$ -		
		Subtotal							\$ -	\$ -		
		Irrigation Management										
		Irrigation water management (449) ⁵	20-35	45-60	each	1	\$ 50	\$ 750	\$ 50	\$ 750		
		Subtotal							\$ 50	\$ 750		
		Runoff/Erosion Management										
		Runoff management system (570) ^{3 5}										
		Paved parking	80-85		square yard	480	\$ 1	\$ 2	\$ 408	\$ 936		
		Filter trap	10-25		acre	1	\$ 375	\$ 12,500	\$ 375	\$ 12,500		
		Subtotal							\$ 783	\$ 13,436		
								TOTAL	\$ 833	\$ 14,186	\$ 83	\$ 1,419

an											
BMP LEVEL OF EFFORT	POTENTIAL MPs / BMPs	Nutrient Management Effectiveness (percent)	Water Management Effectiveness (percent)	Components				Capital Costs		Annual Operation and Maintenance	
				Unit	Number of Units	Cost per unit	Cost per unit (high)	Low	High	Low	High
LOW	Facility nutrient reduction management plan			each	1	\$ -	\$ -	\$ -	\$ -		
									-		
	Runoff/Erosion Management None										
							TOTAL	\$ -	\$ -	\$ -	\$ -
BMP LEVEL OF EFFORT	POTENTIAL MPs / BMPs							Capital Costs		Annual Operation an	d Maintenance
				Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
MEDIUM	Facility nutrient reduction management plan			each	1	\$ -	\$ -	s -	\$ -		
								\$ -	\$ -		
	Irrigation Management Irrigation water management (449) ⁵	20-35	45-60	each	1	\$ 50	\$ 750	\$ 50	\$ 750		
	Subtotal							\$ 50	\$ 750		
	Runoff/Erosion Management None										
			-				TOTAL	\$ 50	\$ 750	\$ 5	\$ 75
	BMP LEVEL LOW BMP LEVEL OF EFFORT MEDIUM	BMP LEVEL OF EFFORT LOW Nutrient Management Facility nutrient reduction management plan Subtotal Irrigation Management None Runoff/Erosion Management None BMP LEVEL OF EFFORT MEDIUM Nutrient Management Facility nutrient reduction management plan Subtotal Irrigation Management Facility nutrient reduction management plan Subtotal Irrigation Management Irrigation water management (449) ⁵ Runoff/Erosion Management	BMP LEVEL OF EFFORT LOW Nutrient Management Facility nutrient reduction management plan Irrigation Management None Runoff/Erosion Management None MEDIUM Nutrient Management Facility nutrient reduction management plan Subtotal Irrigation Management None MEDIUM Nutrient Management Facility nutrient reduction management plan Subtotal Irrigation Management Facility nutrient reduction management plan Subtotal Irrigation Management Irrigation water management (449) ⁵ Subtotal Runoff/Erosion Management	BMP LEVEL OF EFFORT LOW Nutrient Management Facility nutrient reduction management plan BMP LEVEL OF EFFORT None Runoff/Erosion Management None MEDIUM Nutrient Management Facility nutrient reduction management plan Subtotal Irrigation Management None MEDIUM Nutrient Management Facility nutrient reduction management plan Subtotal Irrigation Management Subtotal Irrigation Management Facility nutrient reduction management plan Subtotal Irrigation Management Facility nutrient reduction management plan Subtotal Irrigation Management Irrigation water management (449) ⁵ Runoff/Erosion Management Runoff/Erosion Management	BMP LEVEL OF EFFORT POTENTIAL MPs / BMPs LOW Nutrient Management Effectiveness (percent) Facility nutrient reduction management plan Mater Management Effectiveness (percent) Unit Vater Management Ceach Subtotal Irrigation Management None Mater Management Subtotal Irrigation Management None BMP LEVEL OF EFFORT POTENTIAL MPs / BMPs MEDIUM Nutrient Management Facility nutrient reduction management plan Subtotal Irrigation Management Facility nutrient reduction management plan Subtotal Irrigation Management Irrigation water management (449) ⁵ Runoff/Erosion Management Irrigation water management (449) ⁵ Subtotal Runoff/Erosion Management	BMP LEVEL OF EFFORT POTENTIAL MPs / BMPs LOW Nutrient Management Effectiveness (percent) Nutrient Management Effectiveness (percent) Nutrient Management Facility nutrient reduction management plan Facility nutrient denote in management plan BMP LEVEL OF EFFORT POTENTIAL MPs / BMPs MEDIUM Nutrient Management Facility nutrient reduction management plan MEDIUM Nutrient Management Subtotal IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	BMP LEVEL OF EFFORT POTENTIAL MPs / BMPs LOW Nutrient Management Effectiveness (percent) Ffectiveness (percent) Ffetit F	Nutrient POTENTIAL MPs / BMPs	Nutrient Management POTENTIAL MPs / BMPs	Nutrient Management Facility nutrient reduction management plan POTENTIAL MPs / BMPs POTENTIAL MPs / BMP	Name

	BMP LEVEL OF EFFORT	POTENTIAL MPs / BMPs							Capital Costs		Annual Operation an	d Maintenance
URBAN					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
34 Acres	HIGH	Nutrient Management										
		Facility nutrient reduction management plan			each	1	\$ -	\$ -	\$ -	\$ -		
		Subtotal							\$ -	\$ -		
		Irrigation Management										
		Irrigation water management (449) ⁵	20-35	45-60	each	1	\$ 50	\$ 750	\$ 50	\$ 750		
									\$ -	\$ -		
		Subtotal							\$ 50	\$ 750		
		Runoff/Erosion Management										
		Access road management (560) ^{3 5}										
		Pave roads		85-90	square yard	1000	\$ 2	\$ 4	\$ 2,150	\$ 4,300		
		Runoff management system (570) ^{3 5}							s -	\$ -		
		Filter strips	5-15		acre	1	\$ 375	\$ 12,500	\$ 375	\$ 12,500		
		Filter trap	10-25		acre	0.25	\$ 375	\$ 12,500	\$ 94			
		Stream corridor improvement (204) ³		60-75	acre	1	\$ 700	\$ 5,500	\$ 700	\$ 5,500		
		Subtotal							\$ 3,319			
								TOTAL	\$ 3,369	\$ 26,175	\$ 337	\$ 2,618

Table H-7. Sep	tic Tank I	Disposal Systems										
	BMP LEVEL OF EFFORT	POTENTIAL MPs / BMPs	Nutrient Management Effectiveness (percent)	Water Management Effectiveness (percent)	Components				Capital Costs		Annual Operation and	l Maintenance
SEPTIC TANK DISPOSAL SYSTEMS					Unit	Number of Units	Cost per unit	Cost per unit (high)	Low	High	Low	High
407 Units	LOW	Facility nutrient reduction management plan			each	1	\$ -	\$ -	\$	- \$ -		
		Septic tank inspection ⁶			each	160	\$ 75	\$ 200	\$ 12,00	\$ 32,000		
		Septic system pumping ⁶			each	40	\$ 150	\$ 350				
		Subtotal							\$ 18,00			
								TOTAL	\$ 18,00	\$ 46,000	\$ 1,800	\$ 4,600
	BMP LEVEL OF EFFORT	POWER WAY AND ADDRESS OF THE PARTY OF THE PA							Capital Costs		Annual Operation and	135.4
CAILOOKI	OF EFFORT	POTENTIAL MPs / BMPs							Capital Costs		Annual Operation and	1 Maintenance
SEPTIC TANK DISPOSAL SYSTEMS	OF EFFORT	POTENTIAL MPS / BMPS			Unit	Number of Units	Cost per unit	Cost per unit (high)	Low	High	Low	High
SEPTIC TANK	MEDIUM	POTENTIAL MPs / BMPs Facility nutrient reduction management plan			Unit each					High		
SEPTIC TANK DISPOSAL SYSTEMS								(high)		- \$ -		
SEPTIC TANK DISPOSAL SYSTEMS		Facility nutrient reduction management plan			each	Units 1	(low)	(high) \$ - \$ 200	Low \$ \$ \$ 15,000	- \$ - 0 \$ 40,000		
SEPTIC TANK DISPOSAL SYSTEMS		Facility nutrient reduction management plan Septic tank inspection ⁶			each each	Units 1 200	\$ - \$ 75	(high) \$ - \$ 200 \$ 350	Low \$ \$ 15,00 \$ 7,50 \$ 22,50	- \$ \$	Low	High
SEPTIC TANK DISPOSAL SYSTEMS		Facility nutrient reduction management plan Septic tank inspection ⁶ Septic system pumping ⁶			each each	Units 1 200	\$ - \$ 75	(high) \$ - \$ 200	Low \$ \$ 15,00 \$ 7,50	- \$ \$	Low	High
SEPTIC TANK DISPOSAL SYSTEMS 407 Units		Facility nutrient reduction management plan Septic tank inspection ⁶ Septic system pumping ⁶			each each	Units 1 200	\$ - \$ 75	(high) \$ - \$ 200 \$ 350	Low \$ \$ 15,00 \$ 7,50 \$ 22,50	- \$ \$	Low	High \$ 5,750
SEPTIC TANK DISPOSAL SYSTEMS 407 Units	MEDIUM -	Facility nutrient reduction management plan Septic tank inspection ⁶ Septic system pumping ⁶ Subtotal			each each	Units 1 200 50	\$ - \$ 75	(high) \$ - \$ 200 \$ 350	Low \$ 15,000 \$ 7,500 \$ 22,50 \$ 22,50	- \$ \$	Low \$ 2,250	High \$ 5,750

	BMP LEVEL OF EFFORT	POTENTIAL MPs / BMPs						Capital Costs		Annual Operation and	l Maintenance
SEPTIC TANK DISPOSAL SYSTEMS				Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
407 Units	HIGH	Facility nutrient reduction management plan		each	1	\$ -	\$ -	\$ -	\$ -		
		Septic tank inspection ⁶		each	400	\$ 75	\$ 200	\$ 30,000	\$ 80,000		
		Septic system pumping ⁶		each	100	\$ 150	\$ 350	\$ 15,000	\$ 35,000		
		Replace Conventional Systems with Enhanced System ⁷		each	170	\$ 10,000	\$ 20,000	\$ 1,700,000	\$ 3,400,000		
								\$ -	\$ -		
								\$ -	\$ -		
		0.144						\$ -	\$ -		
		Subtotal						\$ 1,745,000			
							TOTAL	\$ 3,490,000	\$ 7,030,000	\$ 349,000	\$ 703,000

Table H-8. Caltrans

	BMP LEVEL OF EFFORT		Nutrient Management Effectiveness (percent)	Water Management Effectiveness (percent)	Components				Capital Costs		Annual Operation and	l Maintenance
CALTRANS					Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
214 Acres	LOW	Nutrient Management										
		Stormwater Chemical Analysis (nitrogen and phosphorous only)			each	3	\$ 35	\$ 50	\$ 105	\$ 150		
		Facility nutrient reduction management plan			each	1	\$ -	\$ 10,000	\$ -	\$ 10,000		
		Subtotal							\$ 105	\$ 10,150		
		Irrigation Management										
		None7										
		Runoff/Erosion Management										
		None										
								TOTAL	\$ 105	\$ 10,150	\$ 11	\$ 1,015

LAND USE CATEGORY	BMP LEVEL OF EFFORT							Capital Costs		Annual Operation and	d Maintenance
CALTRANS				Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
214 Acres	MEDIUM	Nutrient Management									
		Stormwater Chemical Analysis (nitrogen and phosphorous only)		each	3	\$ 35	\$ 50	\$ 105	\$ 150		
		Stormwater Chemical Analysis (Metals, Organics, Pesticides, and PCBs)		each	3	\$ 800	\$ 1,400	\$ 2,400	\$ 4,200		
		Facility nutrient reduction management plan		each	1	\$ -	\$ 10,000	\$ -	\$ 10,000		
		Subtotal						\$ 2,505	\$ 14,350	\$ 251	\$ 1,435
		Irrigation Management									
		None ⁷						\$ -	\$ -		
		Runoff/Erosion Management									
		Runoff management system (570) ^{3 5}									
		Filter strips	5-15	acre	1	\$ 375	\$ 12,500	\$ 375	\$ 12,500		
		Infiltration Trench	5-10	per foot	5000	\$ 15	\$ 75	\$ 75,000	\$ 375,000		
		Subtotal						\$ 75,375	\$ 387,500	\$ 7,538	\$ 38,750
							TOTAL	\$ 77,880	\$ 401,850	\$ 7,788	\$ 40,185

LAND USE CATEGORY	BMP LEVEL OF EFFORT							Capital Costs		Annual Operation an	d Maintenance
CALTRANS				Unit	Number of Units	Cost per unit (low)	Cost per unit (high)	Low	High	Low	High
214 Acres	HIGH	Nutrient Management									
		Stormwater Chemical Analysis (nitrogen and phosphorous only)		each	3	\$ 35	\$ 50	\$ 105	\$ 150		
		Stormwater Chemical Analysis (Metals, Organics, Pesticides, and PCBs)		each	3	\$ 800	\$ 1,400	\$ 2,400	\$ 4,200		
		Facility nutrient reduction management plan		each	1	\$ -	\$ 10,000	\$ -	\$ 10,000		
		Subtotal						\$ 2,505	\$ 14,350		
		Irrigation Management									
		None ⁸						\$ -	\$ -		
		Runoff/Erosion Management									
		Runoff management system (570) ^{3 5}						\$ -	\$ -		
		Filter strips	5-15	acre	1	\$ 375	\$ 12,500	\$ 375	\$ 12,500		
		Filter trap	10-25	acre	0.5	\$ 375	\$ 12,500	\$ 188	\$ 6,250		
		Infiltration Trench	5-10	per foot	5000	\$ 15	\$ 75	\$ 75,000	\$ 375,000		
		Sediment Basin (350) ³		each	1	\$ 700	\$ 1,000,000	\$ 700	\$ 1,000,000		
		` '					. ,,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
		Subtotal						\$ 76,263	\$ 1,393,750		
					•		TOTAL	\$ 78,768	\$ 1,408,100	\$ 7,877	\$ 140,810

Technical Report for Rainbow Creek Nutrient TMDLs

Appendix H

September 17, 2003

Cost Estimates For Implementing Best Management Practices (BMPs)

Footnotes for Table:

- 1. Mission Resource Conservation District (MRCD) 1997. Brochure: Mission Resource Conservation District Soil Nutrient Analysis. Fallbrook, CA. Printed May 1997.
- MRCD 1997. Brochure: Irrigation Water Management Water Quality Analysis. Fallbrook, CA. Printed May 1997.
- 3. Soil Conservation Practice Numbers from U.S. Department of Agriculture (USDA), May 1995. Calleguas Creek Watershed Erosion and Sediment Control Plan for Mugu Lagoon. USDA Natural Resources Conservation Service, in cooperation with Ventura County Resource Conservation District and the California State Coastal Conservancy. Davis, CA, May 1995.
- 4. Upgrades include sprinkler, drip irrigation, and microspray systems
- 5. BMP practices, cost estimates, and percent effectiveness from U.S. Department of Agriculture (USDA), May 1995. Calleguas Creek Watershed Erosion and Sediment Control Plan for Mugu Lagoon. USDA Natural Resources Conservation Service, in cooperation with Ventura County Resource Conservation District and the California State Coastal Conservancy. Davis, CA, May 1995. Table 4-b.
- 6. MRCD 1999. Focus on Resource Conservation: Septic System Operation, Inspection, and Maintenance The Homeowner's Guide. Fallbrook, CA. Summer 1999.
- 7. Enhanced septic tank disposal systems can provide additional treatment to household wastewater, such as reduction of waste strength, removal of pathogens, and/or removal of nitrate-nitrogen, by adding components that utilize a combination of aerobic and anaerobic treatment before effluent is released to the environment. University of Rhode Island (URI) Cooperative Extension, 2001. Septic System Information for Rhode Islanders, Frequently Asked Questions Fact Sheet. Rhode Island Regional Water Quality Program, University of Rhode Island College of Env. & Life Sciences, Dept.of Natural Resources Science, Cooperative Extension On-Site Wastewater Training Center. May 2001.
- 8. Assumed no significant irrigation by Caltrans occurs along the Interstate 15 corridor

Assumptions

For Commercial Nurseries, Agriculture, Orchards, and Caltrans land use categories, the Facility NRMP is estimated to range from \$0 to \$10,000.

For Parks, Residential, Septic Tank Disposal Systems, and Urban land use categories, the County of San Diego NRMP is assumed to cover this issue.

Average commercial nursery size in Fallbrook is approximately 12 acres. Based on personal communication with Paul Davy, Supervising Agricultural Inspector, Stormwater Management, County of San Diego, Department of Agricultural, Weights & Measures on May 21, 2003.

Average agricultural operation size in San Diego County is approximately 13 acres. Based on USDA, 1997. 1997 Census of Agriculture Highlights for San Diego County, California. USDA, National Agricultural Statistic Service, 1997 Census of Agriculture, Volume 1 Geographic Area Series, "Table 1. County Summary Highlights: 1997," http://www.nass.usda.gov/census/census/7/highlights/ca/cac037.txt, printed on December 17, 2003.